



SPECIALIZED CERTIFICATE IN DIGITAL HEALTH

Course 1: Introduction to Digital Health

Course Number: GLBH-40020

Section ID: 143013

Course Start Date: 09/23/2019

Course End Date: 12/15/2019

Instructor Information

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Email: Please correspond with me via the Blackboard e-mail function.

Communication Policy: Contact me for immediate response Tuesdays and Thursdays 10:00-11:30pm PST

Welcome

Welcome to the Introduction to Digital Health online course. I'm excited to be teaching this course and I look forward to getting to know you this quarter. The course content will address the fundamental Digital Health concepts and (1) build a strong foundation on the key disciplines and topic areas related to Digital Health (2) Identify opportunities and generate ideas on how Digital Health can impact the complex healthcare ecosystem.

Course Description and Goals

This is the first course of the Digital Health Specialized Certificate. The course explores the fundamental concepts and components that make up the Digital Health ecosystem. Students will gain a basic understanding of these topics through a series of lectures, readings, and supplementary information. Evaluation occurs through discussion boards, quizzes and a final technology and policy memo at the end of the course. This course also sets the stage for in-depth exploration of other topics in the core and elective courses for the certificate.

Course Purpose and Prerequisites

Intended for those with a background or interest in healthcare transformation, data science, eHealth, public health, IT administration, engineering and regulatory affairs.

Course Objectives

Upon completion of this course, the student will be able to:

- Build a strong foundational knowledge of the impact of Digital Health on the healthcare ecosystem;
- Apply critical thinking to understand the evolving Digital Health industry;
- Recognize and assess different opportunities for innovation and disruption in the digital health sector;

- Describe the multi-disciplinary Digital health domain and navigate the different roles of healthcare providers, behavioral psychologists, data scientists, technologists, social scientists, and public health professionals

Course Materials/Textbooks

Digital Health Certificate: Digital Health: Scaling Healthcare to the World (Health Informatics), 1st Edition
https://www.amazon.com/Digital-Health-Scaling-Healthcare-Informatics/dp/3319614452/ref=asc_df_3319614452/?tag=hyprod-20&linkCode=df0&hvadid=312748656151&hvpos=1o2&hvnetw=g&hvrnd=10265428570597574924&hvpon=&hvptwo=&hvqmt=&hvdev=m&hvdvcmld=&hvlocint=&hvlocphy=9061189&hvtargid=pla-455009624138&psc=1

Course Overview

This course has 11 sessions. The topics are as follows:

Session 0: **Lecture 0:** Introduction to the Course and Certificate [TKM]
 Session 1: **Lecture 1:** Digital Health Landscape [TKM – WHO landscape]
 Session 2: **Lecture 2:** Telemedicine and mHealth
 Session 3: **Lecture 3:** Connected Health [Kevin]
 Session 4: **Lecture 4:** Health Behavioral Change and Wellness Apps [Gina]
 Session 5: **Lecture 5:** User Experience Design [Wendy Resmed]
 Session 6: **Lecture 6:** Digital Pharmacy [TKM]
 Session 7: **Lecture 7:** Inveillance [TKM]
 Session 8: **Lecture 8:** Data Science for Digital Health [Hobson]
 Session 9: **Lecture 9:** Frontier Technologies: The “Health” Blockchain [TKM]
 Session 10: **Lecture 10:** Industry Landscape [Daniel NexCubed]
 Session 11: **Lecture 11:** Policy and Technology Memo Instructions [TKM]

Online Course Structure

The course is organized using the course menu:

- **Announcements:** This is the first page you see upon entering your course. Your instructor will post weekly announcements and reminders here.
- **Introduction:** Contains an introduction to the course and instructor biography.
- **Syllabus:** Contains the course outline, learning objectives, weekly assignments and course details.
- **Lessons:** This section will have the instructor’s weekly audio/image lectures. The lectures are self-paced and can be replayed anytime like a video movie.
- **Discussion Board** Questions pertaining to each lesson are posted weekly for you and your classmates to discuss and answer.
- **Assignments:** Assignments, quizzes, Course Evaluation, and the Final Exam are available
- **Resources** Additional readings and handouts, web site links, and PowerPoint presentations are here.

Technical and Policy Memo

Students will be required to email the instructor a 3-page Technology and Policy Memo after completion of the final session of the course and no latter than the end of week 11. The brief should consider a healthcare topic that can be explored for digital health application (this can

include examples and use cases introduced in the course that students expand upon). The policy memo should be comprised of an executive summary of the brief (with no more than 2-3 bullet points), a brief background section on why and how the healthcare topic is good for exploration with digital health, a description of what the student views are opportunities and challenges for digital health (including technical and business considerations specific to healthcare), a brief non-technical description of what technology might be used for the digital health solution (e.g. mHealth, telehealth, big data, etc.), and a brief section about potential legal and regulatory considerations (e.g. HIPAA, privacy laws, ethics, etc.) Students will submit T&P memos directly to the course instructor and teaching assistant. For some examples of policy briefs, please visit: <https://www.healthaffairs.org/healthpolicybriefs/>

Course Sessions, Assignments, and Due Dates

The topics are as follows:

Week	Assignments	Points
0	View lecture 1: Introduction to Course and Certificate Assignment #1: Discussion Board	Discussion board: 5 points "introduce yourself and your interest in Digital Health"
1	View lecture 1: Digital Health Landscape Assignment #2: Discussion Board Reading 1: Reading 2:	Discussion board: 5 points
2	View lecture 2: Telemedicine and mHealth Assignment #3: Discussion Board Reading 3	Discussion board: 5 points
3	View lecture 3: Connected Health Assignment #4 (Quiz: course quiz) Reading 4	Quiz: 20 points
4	View lecture 4: Health Behavioral Change and Wellness Apps Assignment #5: Discussion Board and Student Peer Review Assignment Reading 4	Graded Peer Review: 20 points Discussion board and Peer Review: 5 points
5	View lecture 5: User Experience Design Assignment #2: Discussion Board Reading 5 [to be assigned]	Graded Peer Review: 20 points Discussion board: 5 points
6	View lecture 6: Digital Pharmacy Assignment #3 (Quiz: Digital Health concepts) Reading 6 [to be assigned]	Quiz: 20 points

7	View lecture 7: Infoveillance Reading 7 [to be assigned]	Discussion board: 5 points
8	View lecture 8: Data Science for Digital Health Reading 8 [to be assigned]	Discussion board: 5 points
9	View lecture 9: Frontier Technologies: The "Health" Blockchain Reading 9 [to be assigned]	Discussion board: 5 points
10	View Lecture 10: Industry Landscape Reading 10 [to be assigned]	Discussion board: 5 points
11	Policy and Technology Memo Instructions	Final Exam: 30 points